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ON THE COMPARATIVE ANTHROPOLOGY OF SCOTLAND.

THE earliest accounts which we possess of North Britain are to be found in the writings of the Romans ; and, although these are of considerable importance to the man of science, who makes man his study, yet, upon the whole, he finds them rather vague and meagre, so far as regards that kind of information which he especially requires. Tacitus describes the Caledonians as a red-haired, large-bodied people ; and, from that loose observation, infers them to be of German origin ; he assigns also a Spanish origin to the Silures on account of their dark features. Writers who seem to have had but an indifferent knowledge of the nature of analytical inquiry are not certainly high authorities to serve as guides for a modern scientific investigator. Indeed ; it may be doubted whether history so-called is more serviceable than romance or tradition to him who would seek light on the distinguishing characteristics of races, nations, and peoples. That red hair was conspicuous among the ancient Caledonians we may believe, just as it is among modern Highlanders ; but that it was more prevalent than in our own times we may very well question. The considerable proportion of red hair that abounded among this people produced a strong impression on the Romans, and led them to conclude that a prominent characteristic was a universal one ; a fallacy of which careless observers are guilty in all ages and in all countries.

The Caledonians, according to Tacitus's own account, were armed in a very different style from Germans ; carried long swords, and were so expert at throwing the dart, that had not the Romans closed with them in such a manner that their long swords were of little avail, the victory was sure to be theirs. Writers of the middle ages mention bows and arrows as weapons in the use of which the Highlanders

were extremely skilful. Nicolay d'Arfeville, a French writer, in a work published by him in the year 1583, expresses himself respecting them in the following terms :—" Their arms are the bow and arrow and some darts, which they throw with great dexterity, and a large sword, with a single-edged dagger. They are very swift of foot, and there is no horse so swift as to outstrip them, as I have seen proved several times both in England and Scotland." From these remarks we readily perceive how much the Highlanders of the sixteenth century correspond in character with the Caledonians who encountered Agricola and the Romans at the foot of the Grampians. But one weapon is there, the dagger, which was wanting in the arms of the Caledonians. Did not the contests with the Romans lead to the invention of the dirk, that weapon which was such a favourite with the Scotch Gael of the middle ages? The swiftness of foot ascribed by Nicolay d'Arfeville to the Scotch Gael of the sixteenth century, is ascribed by Harald Gille, son of Magnus Barefoot by an Irishwoman, to the Irish Gael of the twelfth century. On mentioning the extraordinary swiftness of the Irish to some persons at the Norwegian court, Magnus, the king's son, doubted his word. Harald repeated his assertion,—" It is true that there are men in Ireland whom no horse in Norway could overtake." So to prove his saying he runs a race on foot with Magnus the king's son mounted on his swift runner, and outstrips him thrice; and it is said in the Saga, " Then Harald ran quickly past the horse and came to the end of the course so long before him that he lay down and got up and saluted Magnus as he came in." On this occasion King Sigurd addressed his son in the following words :—" Thou callest Harald useless, but I think thou art a great fool and knowest nothing of the customs of foreign people. Dost thou not know that men in other countries exercise themselves in other feats than in filling themselves with ale and making themselves mad, and so unfit for everything that they scarcely know each other."

Swiftness of foot, then, seems to have belonged to the Gael at various periods; and this agrees with the superior development of foot and leg which Dr. Knox, and other able writers on race, have clearly shown to be characteristic of Celts. The love of strong drink seems to have been a failing of the old Norwegians of the days of Harald Gille, as it is at this day of many of their mixed descendants in the British Isles.

In considering the original population of Scotland before Teutonic invasion took place, it is desirable, so far as it can be done, to investigate the qualities by which it was distinguished from that of other countries, and to what extent those qualities agree with, or differ

from, those which are peculiar to the present inhabitants; also, to what extent the present Scotch differ from pure Teutonic nations in manners and character. On the decline of the Roman empire, the south-east of North Britain was invaded and seized upon by Saxons and Angles, while portions of the west and south-west were conquered by the Scots from Ireland. As these Scots constituted an important element in forming the nationality of Scotland, some inquiry into their history may throw light upon both Scottish and Irish ethnology.

The people anciently called Scots, called themselves *Gaedal*, *Gael*, or *Gaoidhil*, as Gaelic speaking Scotch and Irish do at the present day. They called themselves, also, *Feinn*, and sometimes *Sciut*. These three names are, in old Irish writings, applied to the self and same people. The word *Gaedal* is formed from *cia*, a man, and *deal*, a root, meaning light, clearness, or whiteness; the name, therefore, signifies a white or fair man. *Deal* or *dheal* (in Gaelic *dh* and *gh* have the same sound, which bears the same relation to *g* hard that *ch* in German does to *c* hard or *k*) has passed into *geal*, white or clear. In the Gaelic language, whatever is loved is figuratively called *geal*, white; and whatever is hated, *dubh*, black; so from *geal*, white, comes *gaol*, love, friendship, relationship; hence Gael, one of the kindred, a fair man, from which the Latin Gallus. Celtæ is from *gaolta*, relatives, men of the same nation. It may be interesting, in connection with a race which has retained its characteristic name for thousands of years, to trace the close analogy subsisting between the numerous words derived from the root *deal*. *Dile*, love, friendship; *dileas*, beloved, faithful; *deal*, friendly; *deala*, friendship, kindred; *dealan*, lightning; *dealradh*, brightness; *dealt*, dew. By mutation of the initial letters peculiar to the Celtic languages, the *d* in these words becomes, according as the word is affected, *dh*. It will further illustrate the transformations which the name Gael has undergone to produce instances of the manner in which it is spelt in the Dean of Lismore's book. The dean's orthography is peculiar, and differs widely from the old Irish and modern Gaelic spelling. "*Gaywill, Geil, Zeillew, Gyle,*" are the various forms of the name in the dean's book. A foreigner, or one who is not of the kin, is called *gall*, a word rather closely allied in sound and spelling to its opposite. It is spelt in the Dean of Lismore's book, *Gyill, Zall, Gallew, Gaule, Zallew*. Its root is probably *dall*, blind, without light or lustre. Kindred words, *gal*, *gul*, grief, weeping; *galar*, disease; *goill*, a harsh expression; *gailionn*, coarse weather. It is rather a curious fact that many words in Gaelic which express opposite ideas vary but slightly from each other. This fact illustrates beautifully that love of minute discrimination which is so strong a trait in the character of the Celtic races. The

following are examples of this peculiarity. *Deal*, light ; *dall*, without light ; *fèile*, generosity ; *foill*, treachery ; *aill*, agreeableness ; *oil*, disagreeableness ; *fiar*, true ; *fiar*, crooked, false ; *nèamh*, heaven ; *nìmh*, poison ; *caoin*, amiable ; *càin*, to traduce ; *coir*, justice ; *coire*, harm ; *ceart*, right ; *cearr*, wrong ; *sgath*, slaughter ; *sgàth*, shelter, protection ; *gean*, pleasure ; *cean*, want.

The other name by which the people have been known, *Feinn*, is identical in meaning with the preceding. The singular form is *Fiann*, and another plural form is *Fianntai* or *Fianntaidh*. *Fionn* means white or fair, and *Fiann* is a white or fair person ; *Feinn* or *Fianntai*, signify, therefore, the white or fair people. This is the name given to the old Gael in all their ancient ballads—the ballads which supplied Macpherson with materials for those works which have gained such a wide world celebrity. It is also the name of one of the ancient Gallic nations, who were skilful navigators, had superior ships, and fought gallantly by sea and land against Cæsar and his Roman legions. They had intercourse with Britain, whence they obtained auxiliaries against the Romans, and there is little room to doubt that the Gallic Veneti were the same race with the Scotch and Irish *Fianntai*, or Gael. The name of their chief town, Dariorigum, is Gaelic ; it is *doire righ*, grove of kings or chiefs. Although, generally speaking, the Celts are not disposed to seafaring pursuits, yet there are varieties of them to which a sea life is more or less attractive. The ancient Irish visited the shores of Britain, in the time of the Romans, both for the purpose of plunder and commerce ; and, at a subsequent period, found their way into Iceland before Norsemen had ever set foot upon the soil.

Scot, Sciut. This name, by which the Gael of Ireland were known to the Romans, and by which all the natives of Ireland were known for several centuries after their conversion to Christianity, signifies the ruling men, or the men of power. *Scot* or *sgod*, is the sheet of a sail, and figuratively implies power or superiority. The Gael, *Feinn*, or *clanna mìlidh*, were the ruling people or *sguit*. The word is somewhat allied to *sgiath*, a shield, a word used, also, metaphorically for a warrior or ruler. The word *Scot* has softened down into *Seod*, which now means hero.

The names given to a people by strangers are to be cautiously handled. Whether the name *Scot* was exclusively applied by the Romans to natives of Ireland may be doubted ; but it would be a great mistake to suppose that the race to which the name of Scots was applied in Ireland did not abound in Britain before the arrival of the Dalriads. The first name given by the Romans to the bravest and most prominent people in North Britain, was *Caledonii*, *Gael*

daoine, the fair or kindred men, which, it will be observed, is identical with one of the names, *Gael* or *Gaedal*, by which the Irish Scots were distinguished. And as it may be inferred from Tacitus's remarks that they were fairer than the rest of the Britons, the name *Gael daoine*, or *Geal daoine*, was in every respect appropriate; indeed, from Tacitus's description, and from the accounts of the ancient Gael or Feinn handed down by tradition and old Irish writings, it must be concluded, inevitably, that both peoples were of the same race, and that, in this respect, the Dalriads did not differ from the Picts, on whom they encroached. The name of Picts, latterly applied to the Caledonians by the Romans, is from the Gaelic word *feadh*, an army. The *Gwyddhil fichti* of the Welch is *Gaidhil feachda*, that is, the Gael of the army, or the Gaelic soldiers. *Cruithne* or *Cruithneach*, is another name that is rather puzzling, but it is nothing more or less than the Gaelic equivalent for Brython, and might have been applied in the past as *Gael*, *Eileannach*, *Eireannach*, and *Albannach*, are applied at the present day. An illiterate Highlander distinguishes himself from a Gaelic speaking Connaught Irishman by calling himself *Gael* and the other *Eireannach*. He distinguishes his own language from that of the Irishman by calling it *Gaelig*, while he calls that of the latter *Iris*, a corruption of the English word Irish; on the other hand, the Irishman distinguishes himself from the Scottish Highlander by calling himself *Gaoidheal*, and the latter *Albannach*; or *Eileannach*, an islander, if from the Hebrides. In the past, in the same manner, a Gael from North Britain would be called *Cruithnach* or *Briton*, in Ireland, and so would be confounded with other British races. Whether the Irish *Cruithne* were ancient Scottish Gael or Cymry may admit of some dispute; but they are as likely to have belonged to the former race.

Language of North Britain previous to the Dalriadic invasion. With regard to the language of North Britain at the time of the arrival of the Irish Scots, there are good grounds for inferring that it was a dialect of Gaelic, having more in common with Cymraeg and other British dialects than the language of Ireland. In the east and south the language was probably intermediate between Gaelic and Cymraeg. It may be observed here that there are no grounds for believing that all the dialects of South Britain were nearer Cymraeg than Gaelic. The Bretons do not call themselves Cymry, and their language they call Breton; while they call the French language Gallec. It is extremely probable that all the old British languages passed into one another by imperceptible shades, and that the old dialects of the south and east of Scotland would form connecting links between the Gaelic and Cymraeg branches of the Celtic stock.

The part which the Dalriads played in North Britain seems to have been similar to that played by the Normans in England at a subsequent period. They were Scots, chiefs or ruling men, not hewers of wood and drawers of water; they did not enter North Britain to remove the native population, but to become its chiefs and rulers. In the past a ruling people that would not toil as menials could not but necessarily encroach. Conquerors they were, and sought merely to remove other chiefs to make room for themselves. The Dalriads did not manage to master North Britain in a single battle as the Normans did with the southern portion of the island several centuries later, but where they did not conquer by the sword they prevailed by intellectual superiority. They were Christians, and the Picts were not; and having been somewhat humanised by the influence of the new religion, they granted an asylum to one of their own royal race, who sought a conquest of a different kind from that of Fergus Mor Mac Eirc—the conversion of the Picts to the Christian religion.—This was *Calum Cille*, or St. Columba, one of the O'Neill dynasty which ruled Ireland for five centuries. Having obtained Iona for his residence, *Calum Cille* there trained moral soldiers, through whose aid he effected a conquest more important in its results than the physical territorial subjugation of the mailed warrior, as the conversion of the Picts was followed by that of the Saxons of Britain, and from Iona proceeded many of those Scots who laboured in the seventh, eighth, ninth, and tenth centuries to enlighten the nations of the continent in letters and religion. As the Normans were found everywhere in England, before the arrival of the conqueror, as bishops, heads of monasteries, etc., so the Dalriads were found everywhere in Pictavia as religious teachers and ruling men long before the union of the two kingdoms under Kenneth Mac Alpine. It is usually supposed that the people of Argyle, Galloway, and Ayrshire are the descendants of the Irish Scots, and the northern Highlanders those of the Picts; but this theory requires to be considerably modified, as the Dalriads, as has been already observed, were men who sought to rule but not to toil. The Dalriadic infusion of blood extended to every part of Scotland, although, doubtless, more remained in those parts near Ireland than extended to other districts; but it was nothing more than a fresh infusion of Gaelic blood, and merely increased the quantity of that which formerly existed.

Anglo-Saxon Dialect of Scotland. In taking a view of Scotland we find it inhabited by two peoples who speak two different languages;—the one Anglo-Saxon, and the other Gaelic;—and this fact has led many writers to draw erroneous conclusions regarding the races with which this country is peopled. In examining Scottish history, on

which much light has been thrown of late years by Messrs. Skene and Innes, and, more lately, by Mr. W. Robertson, in his *History of Ancient Scotland*, it will be found that the ancient bounds of the Gaelic language included the whole of the country north of the Frith of Forth, besides the most of the south-west. From the south-east the Anglo-Saxon dialect extended north and west, and gradually gained ground owing to its having become the court language, and being, besides, the speech of the more fertile districts of the kingdom. The language was changed, but not the race; but the Saxon, through time, was gradually intermixed with the Gael and other British races that abounded in the land; while the invasion of the Danes in the east infused more Teutonic blood into the people, and helped to modify the language which was spoken by them. The lowland language has borrowed many words from Gaelic and British, and has undergone the corruption which a language undergoes when it becomes that of an alien people. Idiomatic phrases are the test of original purity of language. A blundering use of *shall* and *will* is so characteristic of Scotchmen, both Highland and Lowland, as to become the shibboleth by which a North Briton is known after having lost the most of his dialectical peculiarities. A celebrated essayist asserts that a London apprentice boy can use these words more correctly than they are used by Hume and Robertson; and there are many fairly educated Scotsmen who can hardly appreciate the delicate absolute *shall* of Shakespeare's English *Coriolanus*, and, doubtless, it would be a puzzle for the old Roman also. A glance at Barbour's *Bruce* and at Burns's poems will readily show how much the Anglo-Saxon language of Scotland has altered from the days of Barbour to those of Burns. The language of Barbour is good Anglian; that of Burns is one peculiar to Scotland—a new speech formed out of a foreign one by a people who had formerly used a different tongue. Those words associated with feeling are sometimes retained when almost every trace of the old language is lost; and hence broad Scotch has retained the old British words, *dad*, father; *mammy*, mother; as well as the Gaelic words *ingle* (ainneal), a fire; *beltin*, the first of May, etc. The same process which has gone on in Gaelic with regard to borrowed words has affected the whole broad Scotch—that is, a breaking down of the consonants. In Gaelic, Scripture names have altered much the same as in French;—Moses has become *Maois*; Adam has softened into *Adhamh*, pronounced *Aav*; Solomon into *Solamh*, pronounced *Solla*, etc. In broad Scotch all words ending in *l* have lost the final letter; thus, full, fall, careful, frightful, have changed into *fu'*, *fa'*, *carefu'*, *frightfu'*; the consonants are also lost in the middle of words—wonder, thunder, London, are transformed

into *Lon'on, thun'er, won'er*. From these, and other analogous mutations, the proportion of vowel sounds to consonants is greater in Lowland Scotch than in English; a fact which clearly shows how a foreign language acquired by a people is affected by the characteristics of the one which it had displaced. Mr. Ellis, in his *Essentials of Phonetics*, makes the following remarks on the Lowland Scotch:—"The great difficulties of pronunciation centre in the numerous vowels, in which the Scotch is even richer than the French if the nasal vowels be excluded." This preponderance of vowels is also peculiar to Gaelic; and, like French, it has its series of nasal ones. It may be observed that all the vowels are nasal, both in Scotch and Gaelic, before *m* and *n*.

The languages usually spoken by Celts imply that they belong to races fond of precision and universality. The orthography of Scotch and Irish Gaelic obeys one rule—which is, that if one syllable of a word ends with a broad vowel the next must begin with a broad one; and if with a small one the next must begin with a small one. There are five vowel letters altogether, of which three, *a, o, u*, are called broad, and two, *e, i*, small, from the peculiar character of the sounds which they represent. The following are instances of this rule, which admits of no exception: *iongantach*, wonderful; *amaideach*, foolish; *figheadair*, a weaver; *eireachdail*, handsome. In Scotch Gaelic, the accent of all words not compounded, is on the first syllable, and all such words are monosyllables, dissyllables, and trisyllables. In Welsh mostly all the words are accented on the penultimate; indeed, the Celtic mind seems to seek the absolute in everything; rules, laws, and governments complete in themselves and independent of exception, leaving no room for doubt or discussion. Like French, Italian, and Spanish, modern Welsh and Gaelic have no neuter gender, a fact which indicates that the races that speak these languages are strongly emotional. Like French, the adjective is placed after the substantive in Welsh and Gaelic—the universal before the particular, implying races more deductive than inductive in intellect. A future tense distinguishes Welsh and Gaelic from English and German, as it does Italian and French. The mutation of the initial consonants in Gaelic and Welsh would seem to have an analogy to the silent character of final consonants in French words before other words beginning with consonants. Both peculiarities may be traced to a love of euphony in the races that speak the foresaid languages. Imaginative races cling to inflections of speech, which express past and future time; so Scotch Gaelic has lost its present tense, but retains its past and future. The past and future are the regions through which imagination takes her flights; the present is the centre

round which memory and observation revolve. A future and conditional tense are common to both French and Gaelic :—

FRENCH.	GAELIC.	ENGLISH.
<i>Future.</i>	<i>Future.</i>	
Je vendrai,	Reicidh mi,	I shall or will sell.
<i>Conditional.</i>	<i>Conditional.</i>	
Je vendrais,	Reicinn,	I should or would sell.

Races may change their language and adopt that of an alien one, but the acquired tongue is sure to be modified to accommodate the mental requirements of those whose speech it has become. The French language, manufactured out of Latin, is as Celtic in character as Welsh or Gaelic ; the structure of the Spanish indicates a Celtic element in the people, and a Basque scholar could, perhaps, show that the speech of Spain is as Celtiberian as the people. The Irish, who have lost their old speech, retain the *brogue* of the old one, along with many of its idioms ; while Dumfriesshire and Galloway men have often mistaken Argyleshire people for natives of their own districts, and many of the inhabitants of the northern counties, whose mother tongue is English, speak it with as strong a twang as the Gaelic-speaking Highlanders of Inverness-shire. The Scotch are not two nations, but one consisting of two peoples, who are one mixed race, with the original elements mixed in various proportions, and speaking two different languages. As Scotch nationality is altogether of Celtic origin, and had a vital existence before Scandinavian invasion took place, the Celtic characteristics have been first discussed before entering upon those of Teutonic origin.

Types. The east and west of Scotland present peculiarities of form and feature widely differing from each other ; but extremes meet here as in other things. Many of those peculiarities of form, features, and complexion, are shown by scientific inquiry to be intrusive, and traced by historical research to an original source. Wonderful, indeed, and multifarious, are the features, forms, and complexions, presented by the various districts of Scotland. But pervading the whole, science discovers a network by which all these are united. The north-east of Scotland and the west, notwithstanding the wide difference which is observed in the features of the population of both, still present bodily shapes and countenances which are amazingly like each other. Whence this diversity and identity ? and how is the matter to be explained ? Is it peculiar to all countries ? Do Norwegians, Danes, and Swedes present such diversities ? Do Laplanders ? do Esquimaux ? do Chinese ? do Japanese ? From what distinguished travellers tell us in their writings, and from our own limited observations, we can very confidently say no. But in entering upon this

argument, the question is suggested, what is a type? to which the reply is, that it is a peculiar form of body susceptible of variation, as any mathematical curve, such as an ellipse or parabola is. There may be an infinite variety of ellipses, hyperbolas, and parabolas, as well as of other curves; but the mathematician is always able to distinguish the one kind of curve from the other, even when arcs of different ones are combined. So it is with the types of the human form. Once having got a hold in the mind of the lines that constitute an elementary one, it can, henceforth, be followed in its various gradations, and when it intermixes with others, it can be traced in the same manner as the different parts of a figure, made up of portions of various curves, could be traced.

With regard to Scotland there is one type to be observed among its mixed race which can be found elsewhere absolutely pure, and that is the Scandinavian. Sweden, Norway, insular Denmark, the north of Jutland, and Iceland, are inhabited by a race which may be considered nearly pure; so that by comparing the Norwegian type with those prevailing in Scotland (the Norwegians being the purest Scandinavians), we shall be able to ascertain the extent to which the Scotch nation has been modified by the infusion of northern blood. But at the outset it will, perhaps, be preferable to direct attention to those types which were indigenous before historical Scandinavian invasions took place; that is the types usually called Celtic. In the Highlands two types, not Teutonic, may be almost everywhere observed, and these are decidedly dominant ones. As that type which is historically Celtic is not absolutely decided, I would call the one dolichocephalous, and the other brachycephalous Celt; not that the latter is, perhaps, absolutely brachycephalous, but relatively to the other it may be called so. The dolichocephalous type is frequent in the isles, very conspicuous in Man and the Southern Hebrides, the western portions of Ross and Sutherland; the brachycephalous in the north-eastern parts of Argyle, in Perthshire, and the northern Highlands. There is a third type found occasionally everywhere in the Highlands, rather frequent in the outer Hebrides, very prevalent in the west of Ireland, and not seldom met with in the Lowlands of Scotland; and as it is not a dominant one, seldom being seen when pure but among those of inferior station, it may be as well at the first to discuss its distinctive features. Of this type the portraits of Sancho Panza will give a good idea. The stature is generally low, although sometimes tall, with dark skin and complexion; the head is long, low, and broad; the hair black, coarse, and shaggy; the eyes black or dark brown, or grey, with fiery lustre; forehead receding, with lower part of face prominent; nose broad and low; eyebrow

running off obliquely from the nose ; feet not well shaped ; legs short and much bent. Warmth of feeling, fierce temper when aroused, and a considerable amount of cunning. Very fond of money, which individuals of this race manage to hoard amidst apparent poverty and wretchedness. Diligent and industrious when it can be clearly seen that gain shall be the result ; otherwise indolent and indisposed to application.

In Ireland and the Highlands of Scotland this race is found mixed in various degrees with the two previously mentioned, and with the Scandinavian ; but in the Highlands of Scotland the proportion which it bears to the other races is inconsiderable. The first type I would consider the truly Celtic one, to which belonged the Galli of the old Roman writers and the Celtæ of Cæsar. The dolichocephalic Celt is of various sizes, but often tall ; he is of various complexion, ranging from fair to dark ; the colour of the skin varies from a ruddy white to a swarthy hue, and is sometimes rather dark ; the shape of the body is often graceful ; the head is high and long, often narrow, and can seldom be called broad in proportion to the height and length ; the face is frequently long, and the profile is more or less convex—the convexity being sometimes so little as to approach a straight line ; the lips are usually full, often thick, and more or less projecting ; the chin and lower jaw are obliquely placed, and the contour of the lower jaw, taken from its junction with the neck, is but slightly curved, and looks often to the eye as if a straight line ; the chin sometimes approaches roundness, but is seldom round, and generally has something of the shape of a trapezoid ; the forehead, viewed in profile, gradually increases in prominence from the coronal region towards the eyebrows ; region of the face, from the external orbital angles to the point of the chin, long—a characteristic of which the old Gael, Feinn, or Scots seem to have felt rather proud. (See “Lay of Diarmaid,” *West Highland Tales*, translated by J. F. Campbell, Esq.) The nose is frequently large and prominent ; eyebrows prominent, long, slightly arched, sometimes closely approaching a straight line ; cheekbones large and prominent ; eyes more frequently grey and bluish grey, but sometimes dark grey and dark brown ; lustre of the eye strong, but tempered with a peculiar softness of expression ; hair reddish yellow, yellowish red, but more frequently of various shades of brown, of which yellow is the ground colour ; sometimes, when it appears altogether black, a yellow tinge is discovered when closely examined ; not unfrequently the colour is almost a pure red or yellow ; when mixed with the second or third type the hair is coal black, but hardly ever so when pure. The leg and foot are usually well developed, the different parts being very proportionate ; the

thigh is generally long in proportion to the leg, the instep is high, and the ankle is well-shaped and of moderate size ; the step is very elastic and rather springing, the heel being well raised and the knee well bent in walking, and that to such an extent, indeed, in some cases, that as the individual progresses the head descends and ascends. Rather quick in temper and very emotional, seldom speaking without being influenced by one feeling or another ; very quick in perceptive power, but less accurate in observation than the Scandinavian. Persons of this type are clear thinkers, but deficient in deliberation. They are often endued with a fertile and vivid imagination ; they love the absolute in thought and principle, dislike expediency, and are strongly disposed to centralisation. Disposed to make no allowance for opinion or doubt, and dissatisfied until they rest in conviction. Strong sympathy for the weak side, which they are too ready to believe is the right one. Although very patriotic, this race is strongly biassed by universal sympathy, strongly moved by chivalrous notions and glorying in suffering for what they believe to be a right cause. Disposed to a sentimental melancholy, from a strong love of that which is past and gone, and a vivid sympathy with misfortune and suffering, but always taking a bright view of the future, as the sentiment of hope is strong in them. The talented among them are often brilliantly witty and eloquent ; they love the animal kingdom, and sometimes excel in zoological science. In No. 10 this type predominates, and is mixed in various degrees with the Scandinavian, in Nos. 2, 3, 4, 5, 12, and 13 ; and with the brachycephalous Celt in Nos. 7 and 9.

Brachycephalous Celts. In these the head is broad and rather square ; the profile is straight, with broad and large cheek-bones ; the chin is frequently prominent and angular, or pointed ; the nose is generally sinuous ; and the lower jaw is always narrow in proportion to the upper jaw ; the forehead is broad and square, sometimes rather flat ; the face tapers rapidly from the cheek-bones to the chin ; hand square, with prominent finger-joints ; calf of leg large, thick, and strongly developed ; foot and ankle well formed ; legs generally short and more or less bent ; chest square and broad ; lips usually lying close to the teeth, sometimes, but not often, prominent ; complexion dark or sallow ; skin swarthy or brown ; hair reddish-brown, red, and frequently raven black ; eyes far in, often small, seldom large, dark grey, dark brown, or black. Great circumspection and forethought, strong passions and feelings, over which there is good control, but which burst forth violently if much tried. Strongly attached to friends and relations ; very clannish and patriotic ; and little disposed to mix freely except with their friends, intimate acquaintance, and

countrymen. Strong national pride. Generally economical and prudent. Rather apt to take gloomy views of the future. Will bear no insults to their creed, clan, or country. Not so impulsive as the dolichocephalous Celt, but fully more fervent ; being rather disposed to brood long over afflictions, losses, and insults. Strong thinkers ; but not so imaginative as the forementioned race. A strong vein of humour is characteristic of them ; as flashing wit and vivid pleasantry are of the other. It is from this race that the Scotch derive their cautious and clannish character ; and it is its mixture with the preceding one that supplies the "*ingenium perfervidum Scotorum*". They glide along with a shuffling gait, the body progressing as if carried ; the step is very elastic, and the foot traces a curve as it moves along, coming to the ground with the greatest imaginable ease. In No. 8, this type is very conspicuous ; it predominates in Nos. 7, 9 and 11 ; in No. 11, however, the chest is partly of the Scandinavian type.

The Saxon invasion of Britain was followed in the eighth century by that of another people—the Norsemen. These attacked the east of England and Scotland from Denmark ; while from Norway, in the ninth and tenth centuries, they descended upon the west of Scotland and east of Ireland, which they seized and conquered ; establishing their sway in this manner among the Celts, intermixing with them, and so effecting a union from which—very unlike a political one—there can be no repeal. Norwegians and Danes are a seafaring race ; so that the anthropologist who happens to reside near the sea-coast of the Highlands of Scotland, has ample opportunities for comparing the pure type of Norway and Denmark with the mixed one of Scotland. He can take his observations of the crews of Norwegian and Danish vessels, as well as of those of French ones ; and so can compare Norwegians, Danes, and Frenchmen with Highlanders, so as to be able to ascertain how far they agree with, or differ from, each other. He has also ample opportunities of comparing Welsh and Cornish miners with Highland ploughmen, shepherds, sailors, and mechanics.

Scandinavian Type. Stature various ; seldom low, frequently tall. Skin generally pure white, with fair and florid complexion. Shoulders strongly and largely developed. Tall individuals have long arms and legs ; mostly all have long arms. Hair flaxen and sand colour, from which it passes into various shades of brown. Eyes blue and bluish-grey ; occasionally hazel and brown ; larger and more prominent than in the Celtic type, but flatter and less lustrous. Eyebrows more arched, and not generally so prominent as in the Celts. Profile usually straight ; forehead between round and square, well arched horizontally. Face square or oblong, else tapering in a curve towards the

chin ; contour arched, hardly presenting any angularity. Cheek-bones broad and flat. Nose usually of average size, but sometimes large, varying from being slightly sinuous to being considerably aquiline. Mouth well formed ; sometimes small, seldom or ever large, with slightly pouting lips ; lips, however, sometimes straight, and lying in towards the teeth ; often thin, but seldom thick. Chin often prominent, and nearly semicircular in shape. Lower jaw strongly arched, so that it appears to the eye to join the neck as a curve does its tangent. Walk, not seldom awkward, but usually firm and decided. Leg thrown forward in walking, with little bending of the knee or raising of the heel. Foot strongly formed, and often broad, but frequently low in the instep and thick in the ankle. Bones of the leg strongly developed, but calf not in proportion. Strong digestive organs, which give immense physical energy to the race, and account for the proverbial eating and drinking propensities ascribed to them. Deliberative and cool ; doubts numerous, and convictions few. Very accurate observers ; being never biassed in their observations by emotion or prejudice. Powerful local memory, which gives the intellectual portion of the race a talent for geometry, astronomy, and navigation. Impartial in their decisions ; not because they are more conscientious than other races, but that they are fond of truth, in fact, and scorn to be biassed by emotion or feeling. Strong in attachment, but not equally so as the Celts ; and, although less irritable, not so ready to repent or forgive. Excessively fond of personal independence ; to secure which they will encounter the greatest difficulties and hardships. Often rather rough ; but mostly always respectful in manner. Rather dogmatic in opinion ; but very tolerant so far as regards that of others. Fond of the vast and grand ; but rather disposed to turn the marvellous and mysterious into ridicule. Possessed of a genial vein of humour, which hardly ever forsakes them in danger or suffering. Immense firmness and self-reliance, which neither torture nor death can shake. Nos. 1, 3, 4, and 6, are specimens of this type in its purest Highland form ; in Nos. 2, 5, 12, and 13, it is mixed in various degrees with the dolichocephalous Celt.

Intermixture of Types. The various types here described are hardly ever found pure in Scotland. When it is said that a person is of the Scandinavian type, it is merely understood that this type predominates in him ; for no Scotchman, Englishman, or Irishman is Scandinavian in the same sense that a Norwegian, Dane, or Swede is. Everywhere the Scandinavian type is found intermixing with the Celtic ones in various proportions ; but in stronger proportions in all those districts where there is access by sea, and where good harbours abound. In Islay, Colonsay, Mull, Easdale, Lismore, in Stornoway,

in Lewis, and in Harris, the Scandinavian type is very conspicuous. In the northern Hebrides, the dark complexion and eyes of the brachycephalous Celt, are observed combined with the features and form of the Scandinavian. On the small island of Minglay, south of Barra, the dolichocephalous Celt, mixed in different degrees with the Scandinavian, is the most prominent. In the islands of Barra and Uist, the race is principally a mixture of dolichocephalous and brachycephalous Celts, with here and there a sprinkling of Scandinavians. The third type described in this paper, frequently abounds in various degrees of intermixture with the others. In the west of Sky, the Scandinavian type is very predominant; about the middle of the island, the people seem to be half-and-half, Scandinavian and dolichocephalous Celts; while in the east, dark hair, dark features, and the peculiar characteristics of the brachycephalous Celt become apparent. In Ayr and Galloway the dolichocephalous Celtic type is frequent; in Lanark and Dumfries, the brachycephalous type is found mixing in various proportions with the dolichocephalous, the Saxon, the Frisian, and Scandinavian types. In Aberdeenshire, Banffshire, Kincardineshire, and Murrayshire, the people are principally a mixture of Scandinavians and brachycephalous Celts, with a sprinkling of the other races. In Kintyre, the Saxon and Frisian types are observed mixed with the Celtic and Scandinavian; a fact which may be accounted for by the colonisation of that peninsula from the Lowlands in the reign of James VI. The Scandinavian type is very predominant about Loch Fyne side; a fact which proves how great the influence of the Norseman was wherever a haven was to be found.

From the various facts here adduced, it seems evident that the people of Scotland are a mixture of two races, here called Celtic, with which the Teutonic elements, Scandinavian, Frisian, and Saxon, have intermixed in various proportions. The Saxon and Frisian elements are principally confined to the south-east, although there is a sprinkling of them everywhere; which sprinkling is pretty considerable in many parts of the north-east, east, and south-west. From these various types no uniform type has ever been produced; they mix with each other in various degrees, and in such a manner that one member of a family is mostly of the one, and another mostly of the other type. In consequence of this unequal mixture of the elementary characteristics of various races, the complexion of one race frequently combines with the features of another; the eyes of one with the hair of another; the forehead of one with the lower face of another; the foot and leg of one with the chest of another. The colour of the eye, the form of the nose, the shape of the chest, the gait of the body, may be traced through several generations, and identified in third, fourth, and fifth

cousins. When features disappear in a family, they often reappear in the third and fourth generations. Blue eyes are observed in the members of a family whose parents and grandparents had none; and these are ascertained to be inherited from a great-grandmother, whose other great-grandchildren have also blue eyes inherited from her: and numerous instances illustrative of this alternation, which extends to all human characteristics, can be easily adduced. In the mixed race of the Highlands, therefore, and also in that of the Lowlands, every shade of variation is to be observed, from the pure Scandinavian to the pure Celt.

Family and Christian Names. Family names may occasionally render some aid to the anthropologist; but they are of such mutable character that, unless their origin is carefully traced, they are sure to lead to erroneous conclusions regarding the ethnology of a country. How far Highlanders have Anglicised their names, is a question of some interest to the student of the science of man, as the solution of it may help to correct the wrong conclusions of those who attach too much importance to names and language. *MacCalman*, meaning the son of Colman or Calman, is transformed into Dove; calman being Gaelic for dove or pigeon. Those of the name of *MacIain*, son of John, call themselves Johnston; believing the latter name to be the same as their own. *Mac a' Ghobhann*, son of the blacksmith, is converted into Smith. *Mac an Cheaird* (Caird) is transformed into Sinclair by a process rather peculiar, and which cannot be very well understood without reference to Gaelic. Owing to that peculiar law by which the initial letters of Celtic words pass into kindred ones, *s* and *t* are both changed into *h*; so that *Tinkler* and *Sinclair*, were they Gaelic words, would at times be pronounced *Hinkler* and *Hinclair*, two sounds not distinguishable. The word *ceaird*, which originally meant a worker in metals, a smith of any kind, has in recent times been specially applied to travelling tinkers, called in Lowland Scotch tinklers. On this loose foundation the Sinclairs, who settled in Argyleshire from the north, and the Macincairds, who were a native clan, commingled names and became one; the Sinclairs calling themselves *Macancheaird* in Gaelic, and those of the name of *Macincaird* calling themselves Sinclair in English. Among several others of the native men of Craignish who signed obligations of manrent to Ronald Campbell of Barrichibyan, representative of the old family of Craignish April 8th, 1595, are, "Gilchrist Mc.incaird" and "Johne Mc.illichallum ve ean ve incaird". Many Highland names have dispensed with the Mac, and by so doing have lost the original Gaelic characteristic; while, in other instances, son has been substituted. MacDonald is sometimes changed into Donald and Donaldson, MacGilchrist into

Gilchrist, MacNichol into Nicholson, MacMichael into Carmichael, and McIntailyer into Taylor. Among those who signed the forementioned "Obligation" is "Donald McIntailyer for himself and his successioun." *Macan Leigh*, son of the physician, is Anglicised Livingstone. There is also an Irish name Anglicised Dunlevy, *Mac Dhon Sleibhe*, which may be the same as *Mac an leibhe*, also Anglicised Livingstone. The mutation of the initial consonants renders it difficult sometimes to arrive at the original form of a Gaelic name; since after *Mac*, the changed forms of *c, g, d, f, s, b, m*, can hardly be distinguished in sound from each other. Owing to this, *MacMhuirich*, son of Muireach, has been confounded with *MacCuireach*, son of *Cuireach*, Curry; *MacThorcadail*, son of Torkatil, a Norseman, becomes by the same process MacCorquodale; MacKinnon is properly *MacFinguine*, son of Fingen or Finguine. From the peculiarities already mentioned, the sounds of *f* and *g* have been lost in this name; so that it is pronounced like the word *ionmhuim*, *loved* or *beloved*. In consequence of this similarity of sound, the name MacKinnon has been supposed to mean son of love; and accordingly persons of the name have translated it *Love*. In a contract by which Archibald, seventh Earl of Argyle, gives his bond of maintenance to Lauchlan MacKinnon of Strathordile, and receives the latter's bond of manrent in return, in the year 1601, the chief signs his name in old Gaelic or Irish characters, "Lachlan misi McFionguine", Lachlan, I son of Fionguine. The name is found in the writings of the Irish annalists. "Lochene McFingen m. Cruithne, r. (?) A.D. 645." *Annals of Tighearnach*. "Lochene McFingen r. Cruithne obiit A.D. 644." *Annals of Ulster*.

Lughaidh is an ancient Gaelic name, which plays a prominent part in old Gaelic ballads and stories: *luadhadh*, a word resembling it in sound, signifies fulling cloth; so *MacLughaidh*, son of Lughaidh, was imagined to mean son of the fuller, and, as a matter of course, it has been metamorphosed into Fullerton. The number of translated names is endless. The following are examples:—*Mac an t-saoir*, son of the wright, Wright; *MacGhille dhuibh*, son of black servant, Black; *MacGhille bhain*, son of white servant, White; *MacGhille ruaidh*, son of red servant, Reid; *MacGhille ghlais*, son of grey servant, Grey; *Mac a'chleirich*, son of the clerk, Clarke; *Mac an fhleisdeir*, son of the arrow maker, Fletcher; *Mac an fhuchdadair*, son of the fuller, Walker; *MacThomais*, son of Thomas, Thomson. From these instances, it will readily be perceived how erroneous a test family names and language would be in estimating the amount of Highland blood in the Lowlands of Scotland. Irish Gaelic names have undergone similar transformations.

The translation of christian names contributes to the darkening of

knowledge in a similar manner. Norse christian names, of which there are many retained by the Highlanders along with Norse blood, are completely spoilt in translation. *Tormaid* is converted into Norman; *Somhairle*, Somarled, into the Hebrew Samuel; *Eachann*, Hacon, into the Greek Hector; *Raonailt*, Ragnhild, into the Hebrew Rachel; *Iomhar*, Ivar, becomes Edward; the Gaelic *Domhnul* is confounded with the Jewish Daniel.

The names of places in the Highlands may be said to bear a fair proportion to the intermixture of blood. Norse names abound in all districts where the Norsemen settled; and, in some instances, the name is half Norse half Gaelic, as in *Caonag-airidh*, the King's height; in other instances the Gaelic and Norse names combine into one, as in *Eas Fors*, the first part of which word, *eas*, is Gaelic for waterfall, and the latter, *fors*, Norse for the same.

From the philological, historical, and physiological facts placed before the reader in this article, it will surely be sufficiently evident that the Scotch are not two different races or nations, to be designated the "Saxon" and the "Gael", but one race of a mixed character, and one nation, consisting of two kindred peoples speaking two different languages.

HECTOR MACLEAN.

VOLLGRAFF'S ANTHROPOLOGY.*

As it is not likely that the inquiring reader will find the titles of these works (excepting, perhaps, ethnology) in any dictionary, we may as well inform him that by anthropognosy the author means *general* anthropology, treating of man's nature in the *abstract* as contradistinguished from *special* anthropology. The same distinction applies to ethnognosy and ethnology, and to polignosy and polilology. The former constituting the general philosophy of jurisprudence and political science, the latter is their special or comparative philosophy. The three works, although separately published at intervals of two years, and each complete in itself, form thus a sort of anthropological trilogy.

We now proceed to give some of the main features of this remark-

* *Anthropognosie. Ethnognosie und Ethnologie. Polignosie und Polilologie.* By Dr. Karl Vollgraff, Professor of Jurisprudence and Political Science in the University of Marburg. 1851, 1853, 1855.